4..... Introduction from the Director

LIFE SCIENCES

Biochemistry and biology

- 6 Identification of the Caenorhabditis elegans Mating Pheromone
- **7** Topology and Structure of Phopholamban Monomer in Oriented DOPC Lipid Bilayers
- 8 COLMAR Web Server Assisted Metabolic Mixture Analysis by Heteronuclear NMR
- **9** HFEPR Studies of Aminocarboxylate Complexes of Vanadium(III) in Frozen Aqueous Solution
- **10**..... Enhanced Digestion Efficiency, Peptide Ionization Efficiency, and Sequence Resolution for Protein Hydrogen/Deuterium Exchange Monitored by FT-ICR Mass Spectrometry
- **12**..... MR Microscopy of Neuronal Activity in Brain Slices

CHEMISTRY

Chemistry, magnetic resonance techniques, geochemistry

- **14**..... Petroleomics: Chemistry of the Underworld
- **15**..... Application of Solid-State ³⁵Cl NMR Spectroscopy for the Detection of Polymorphism in a Variety of Hydrochloride Pharmaceutical Drugs
- **16**..... Spectroscopy for the Detection of Polymorphism in a Variety of Hydrochloride Pharmaceutical Drugs
- **18** Enhancing Spectral Resolution of Dipolar-Encoded HETCOR Spectra at 900 MHz

MAGNET SCIENCE & TECHNOLOGY

Engineering materials, instrumentation, magnet technology, superconductivity-applied

- 20..... Gadolinium Doped Gold-Speckled Nanoparticles for Multimodal Imaging
- **21**..... Experimental Optimization of Magic Angle Spinning Solid State NMR Spectroscopy at 750 MHz
- **22**..... Modeling of Nb₃Sn CICC Performance Degradation due to Strand Bending and Interfilament Current Transfer
- 23..... Fracture Behavior of ITER and HEP-style Nb₃Sn Superconducting Strand
- **25**..... Significant Reduction of AC Losses in YBCO Patterned Coated Conductors with Transposed Filaments
- **26**..... 33.8 Tesla with a YBa₂Cu₃O_{7-x} Superconducting Test Coil
- **27**..... Bi2212 Conductor and Coil Technology for High Field Magnets
- **28**..... 70 T User Magnet Delivers 250 Pulses at Pulsed Field Facility